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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,834	01/15/2002	Kelly Molenaar	MAC - 203	1333

8131 7590 04/20/2006

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EXAMINER	
GARCIA, ERNESTO	
ART UNIT	**PAPER NUMBER**
3679	

DATE MAILED: 04/20/2006

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/050,834
Filing Date: January 15, 2002
Appellant(s): MOLENAAR, KELLY

Robert L. McKellar
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 1/23/2006 appealing from the Office action mailed 10/21/2004.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

4,568,216	Mizusawa et al.	2-1986
2,559,857	Edwards	10-1948
4,134,701	McEowen	1-1979

2,954,993	Scheublein, Jr. et al.	10-1960
5,564,853	Maughhan	10-1996

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mizusawa et al., 4,568,216 (see marked-up attachment), in view of Edwards, 2,559,857.

Regarding claim 1, Mizusawa et al. disclose in Figure 6 a ball joint comprising an elongated shaft **1**, a ball **2**, a retaining member **20**, a housing **6**, and a fastening means **29a** for fastening the retaining member **20** in the housing **6**. The shaft **1** has an upper end **A2**, a lower end **A3**, and a longitudinal axis **x** running through the upper end **A2** and the lower end **A3**. The shaft **1** is threaded on the lower end **A3**. The ball **2** is rigidly fixed and surmounted on the upper end **A2** of the shaft **1**. The ball **2**, at a highest point opposite the upper end **A2** of the shaft **1**, has a truncated flat face **A6**. The member **20** is externally threaded (col. 5, lines 61-64) on the lower end **A9** of the member **20**. The housing **6** has an outside surface **A13**, a middle portion **A14**, and a lower end **A15**. The housing **6** is internally conformed at the lower end **A15** of the housing **6**. The middle portion **A14** of the housing **6** is internally threaded (col. 5, line 51-54). The middle portion **A14** has a means **A16** for attaching the housing **6** to a support arm of a

suspension system. However, Mizusawa et al. fail to disclose the member **20** having a lubricating port.

Edwards teaches, in Figure 1, a member **32** having a lubricating port (the hole where nipple 34 is mounted on) located in an upper surface **A8** thereof; and the lubricating port is openly connected to a duct **34** providing a passageway to lubricate the ball joint. Therefore, as taught by Edwards, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a lubricating port to lubricate the ball joint.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable Mizusawa et al., 4,568,216, in view of Edwards, 2,559,857, as applied to claim 1 above, and further in view of McEowen, 4,134,701.

Regarding claim 8, the combination of Mizusawa and Edwards fails to disclose shallow channels in the lower end **92** of the housing **91**. McEowen teaches in Figures 1, 3, 7 a lower end **16** of a housing **10** comprises shallow channels **46** for acting as grease reservoirs which accept grease (col. 1, lines 57-61 and col. 3, lines 41-43). Therefore, as taught by McEowen, it would have been obvious to one of ordinary skill in the art at the time the invention was made to comprise the lower end of the housing of Mizusawa with shallow channels for acting as grease reservoirs, which accept grease.

Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scheublein, Jr. et al., 2,954,993 (see marked-up attachment), and Maughan, 5,564,853. Note that Scheublein, Jr. et al., 3,103,377, is omitted because although stated in the rejection the examiner did not rely on Scheublein '377 to teach any missing element or to support the rationale for combining Scheublein Jr. et al. '933 and Maughan. See Final rejection mailed on 10/21/2004.

Regarding claim 1, Scheublein, Jr. et al., '933 disclose in Figure 9 a ball joint comprising an elongated shaft **94**, a ball **100**, a retaining member **104**, and a housing **91**. The shaft **94** has an upper end A**2**, a lower end A**3**, and a longitudinal axis x running through the upper end A**2** and the lower end A**3**. The shaft **94** is threaded on the lower end A**3**. The ball **100** is rigidly fixed and surmounted on the upper end A**2** of the shaft **94**. The member **104** is externally threaded (col. **5**, lines **59-61**) on the lower end A**9** of the member **104**. The housing **91** has an outside surface A**13**, a middle portion A**14**, and a lower end **92**. The housing **91** is internally conformed at the lower end **92** of the housing **91**. A portion of the housing **91** is internally threaded (col. **5**, lines **59-61**). The middle portion A**14** has a means **95** for attaching the housing **91** to a support arm of a suspension system. The member **104** has lubricating port **106** located in the upper surface A**8** thereof. The lubricating port is openly connected to a duct **107** providing a passageway. Appellant is reminded that the lower end **92** of the housing **91**, being internally conformed, is for seating the ball.

However, Figure 9 in Scheublein Jr. et al. fails to disclose a fastening means for fastening the retaining member **104** in the housing **91**; and the ball **100**, at a highest point opposite the upper end A**2** of the shaft **94**, having a truncated flat face.

Scheublein, Jr. et al. '933 teach, in Figure 4, a ball **59**, at a highest point opposite an upper end of a shaft **52**, having a truncated flat face (unreferenced above **59**). Scheublein, Jr. et al. '933 do not discuss the reason for truncating the ball to have a truncated flat face. It appears that a truncated flat face provides a gap for storing more lubricant than a ball without a truncated flat face. Therefore, as taught by Scheublein et al. '933, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the truncated flat face on the ball, at the highest point opposite an attachment of the shaft to provide a gap for storing more lubricant than a ball without a truncated flat face.

Further, Maughan teaches, in Figure 8, a ball joint comprising a fastening means **260**, **262** for fastening a retaining member **244** in a housing **208** to stake the retaining member **244** in place (col. 7, lines 61-62). Therefore, as taught by Maughan, it would have been obvious to one or ordinary skill in the art at the time the invention was made to provide a fastening means for fastening the member in the housing to stake the member in place.

Regarding claim 4, Scheublein, Jr. et al. '933 disclose the attaching means **95** is external threads on an external surface of the middle portion A**14** of the housing **91** (col. 5, lines 53-55).

(10) Response to Argument

Claim 1

With respect to claim 1, appellant argues that Mizusawa et al. teach one skilled in the art about a ball joint that has its major parts manufactured from plastic and that there is no provision for lubrication. The examiner agrees that some parts are made of plastic. However, Mizusawa et al. does not indicate that the plastic is self-lubricating and thus a need for lubrication is the motivation. It is evident that those skilled in the art would use lubrication as commonly taught by Edwards since lubrication would reduce wear in the material. Further, not all parts are made of plastic. Take for instant the ring 4 and the ball stud 1, i.e. the shaft as claimed, in Figure 6 of Mizusawa et al. These parts are not made of plastic and a person of ordinary skill in the art would have known and been motivated to add lubrication to any ball joint to increase the life of these parts especially when the ball of the ball stud rubs on the ring.

With respect to claim 1, appellant argues why anybody skilled in the art would rely on that disclosure to seek out information with regard to ball joints that are to be used in automobile suspension systems. In response, appellant should note that ball joints are used in many applications and the claimed subject matter does not recite any automobile suspension system to obviate the prior art. Since the claims are directed to

a ball joint, any ball joint per se qualifies as prior art. With regard to the argument that the instant invention has an advantage over the cited reference, appellant should note that patentability is based on the structural differences between the claimed invention and the prior art. Accordingly, the combined references teach the claimed invention and the advantages will be inherent in the structure of the combined references.

Claim 8

Appellant argues that the arguments and discussions provided in claim 1 are equally applicable. In response, the response to arguments in claim 1, above, also apply.

Claim 4

With regards to claim 4, appellant argues that the arguments and discussion surrounding the combination of Mizusawa et al. and Edwards as set forth in claim 1, above, are equally applicable in this rejection; and that without Mizusawa et al. and Edward, the rejection is not properly founded. In response, Mizusawa et al. and Edward are not used in rejecting claim 4. claim 4 is rejected over the combined teachings of Scheublein, Jr. et al. '993 and Maughan '853. It should be noted by the BPAI that Scheublein, Jr. et al. '993 discloses a ball joint with a conventional lubrication port **106**.

Appellant further argues that the examiner is basing his reason in combining Scheublein, Jr. et al. on appearances, and that component 57 is also used to

mechanically hold the ball in place and thus there is no reason for placing the truncated flat face on the ball, and one cannot guess the reason for the truncated flat face. In response, Scheublein, Jr. et al. shows the truncated flat face as claimed. Regarding component 57 of Scheublein, Jr. et al., the argument is out of scope as component 57 has no bearing on the rejection because component 57 is not used and the claims are open-ended. The fact that component 57 is an extra component does not prove that one skilled in the art is not motivated to make the flat face truncated. Further, the examiner agrees that Scheublein, Jr. et al. is silent on the reason for placing the truncated flat face as shown. However, one skilled in the art knows that providing the truncated flat face would inherently provide more space for grease to hold between the ball and the bearing shell thus lubrication will last longer.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Ernesto Garcia

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Conferees:

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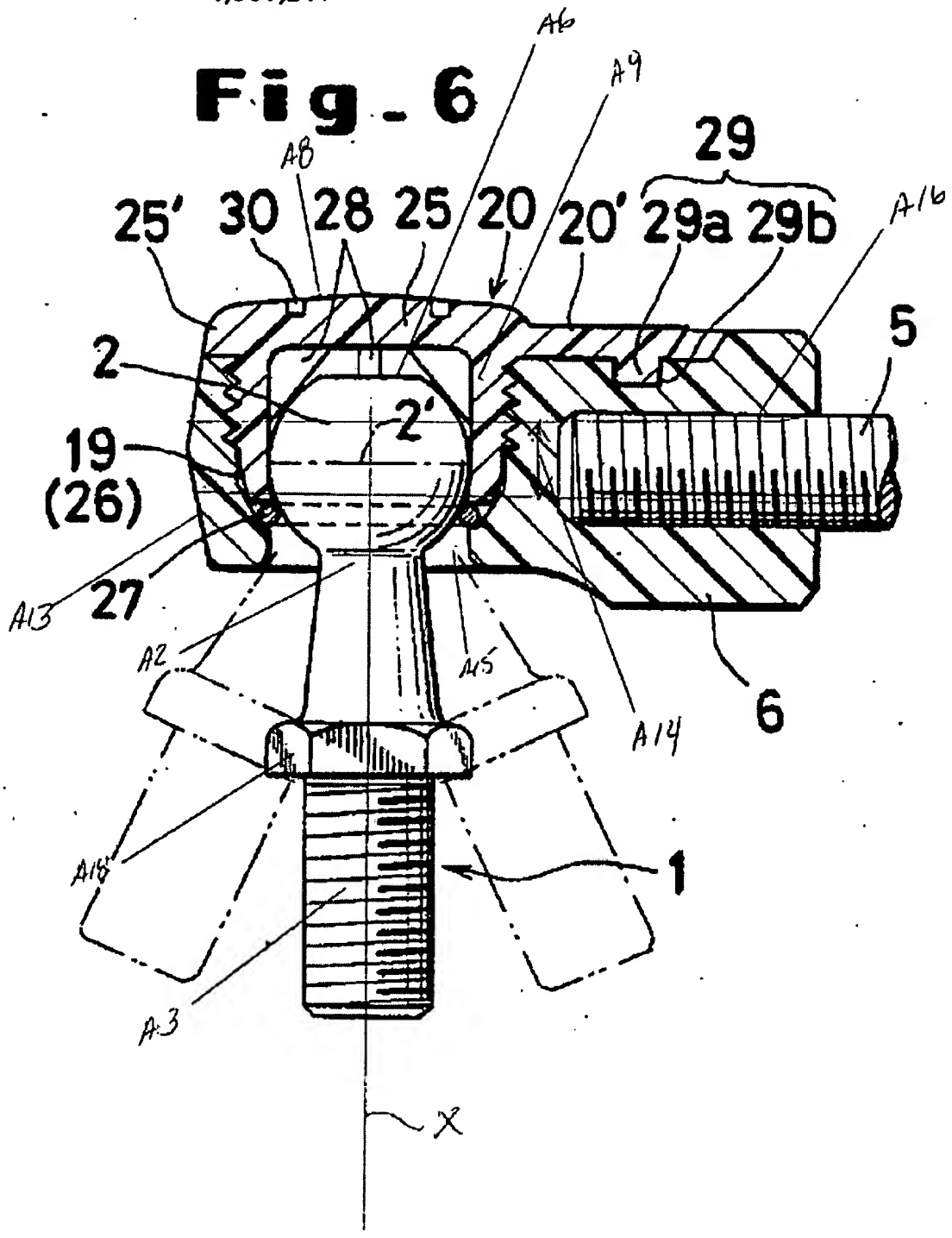
Attachments: one marked-up page of Mizusawa et al., 4,568,216; and,
one marked-up page of Scheublein, Jr. et al., 2,954,993.

(Mizusawa et al.)

4,568,216

Fig. 6



(Scheublein, Jr. et al.)